

#### ABSTRACT OF THE DISCLOSURE

The dimension of the main field as a unit region for exposure is set to an integral submultiple of the arrangement pitch of the LSI to be exposed, by the control computer 62, and the exposure data stored in the form associated with electron beams from a data generation circuit 64 is limited to one-chip data alone in units of a stripe. This data is repeatedly read out to write the stripe. Further, a storage circuit 66 is provided to store the exposure data by means of a double buffer memory unit for each electron beam. While LSI is written according to one of the buffers, the next exposure stripe data is prepared on the other buffer, thereby bringing about a substantial reduction in the required speed of the exposure data generation circuit.